

FIG.1

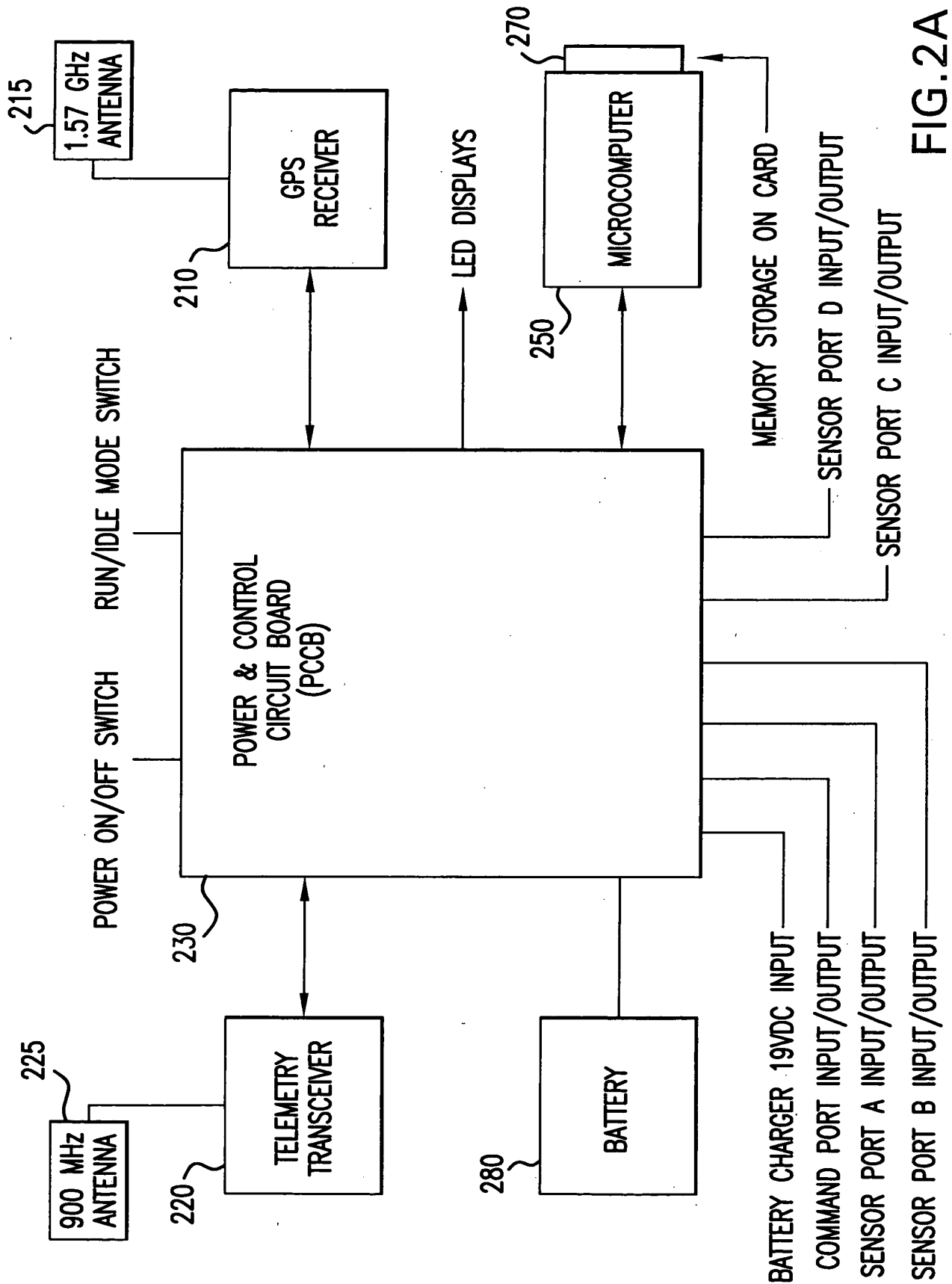


FIG. 2A

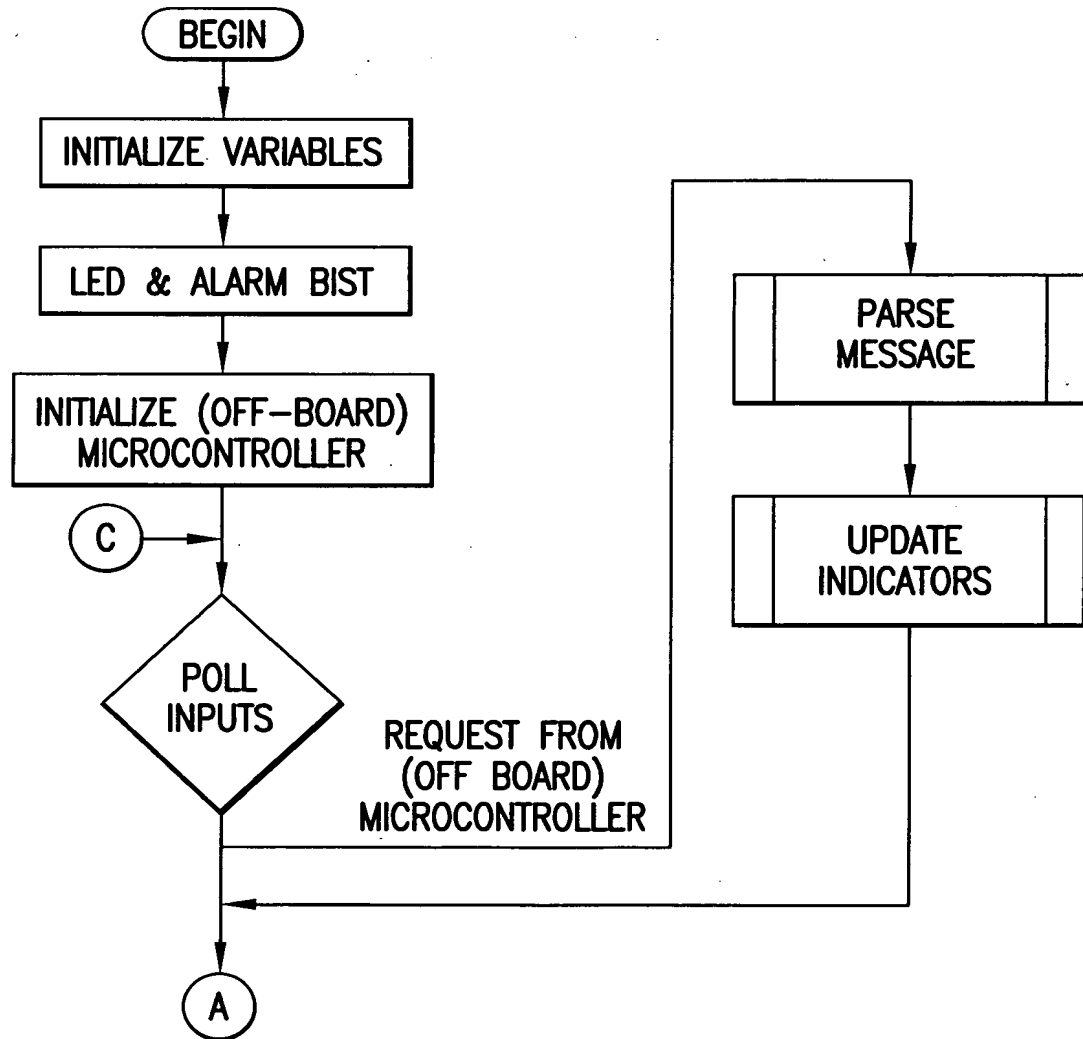


FIG.3A

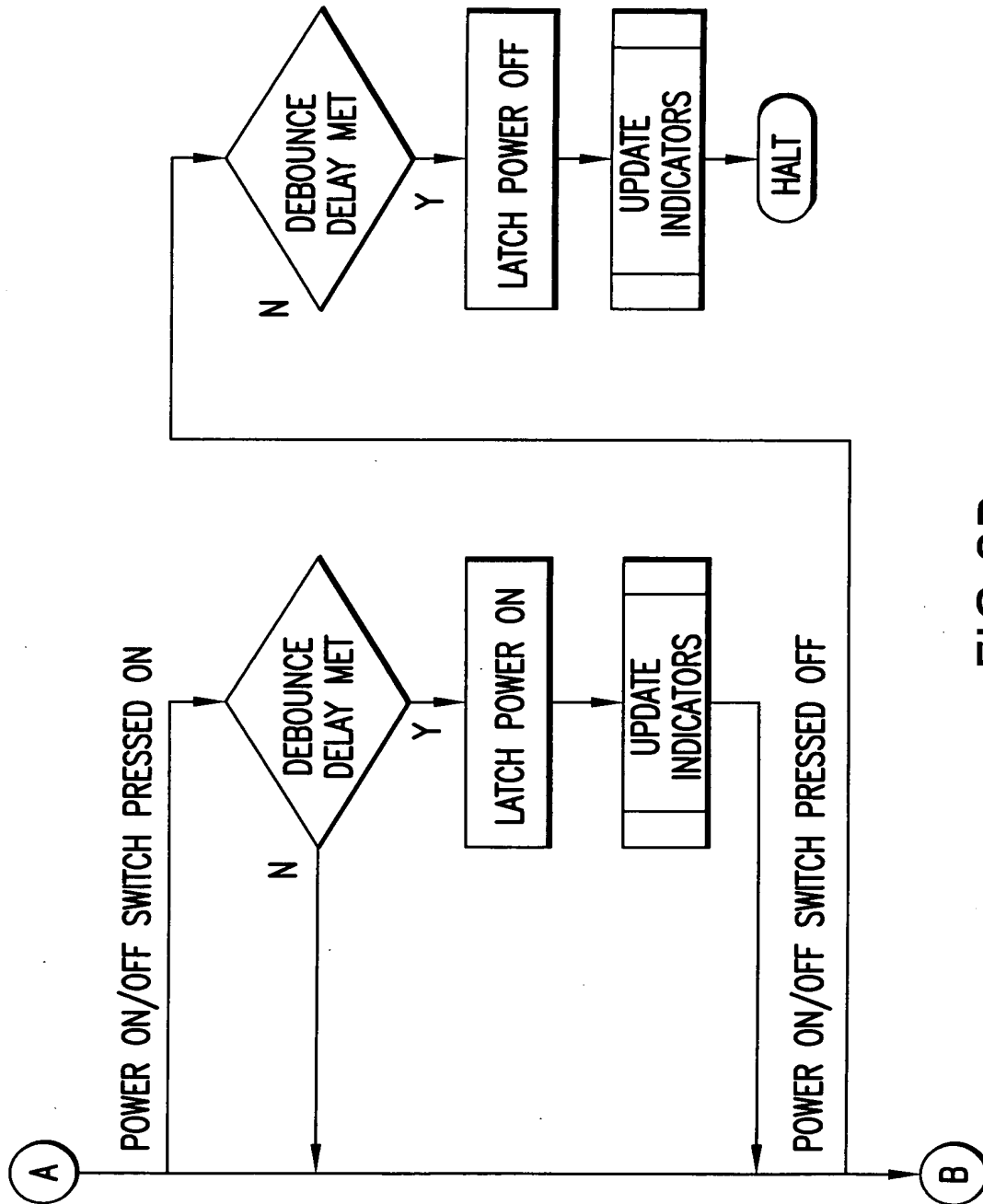


FIG. 3B

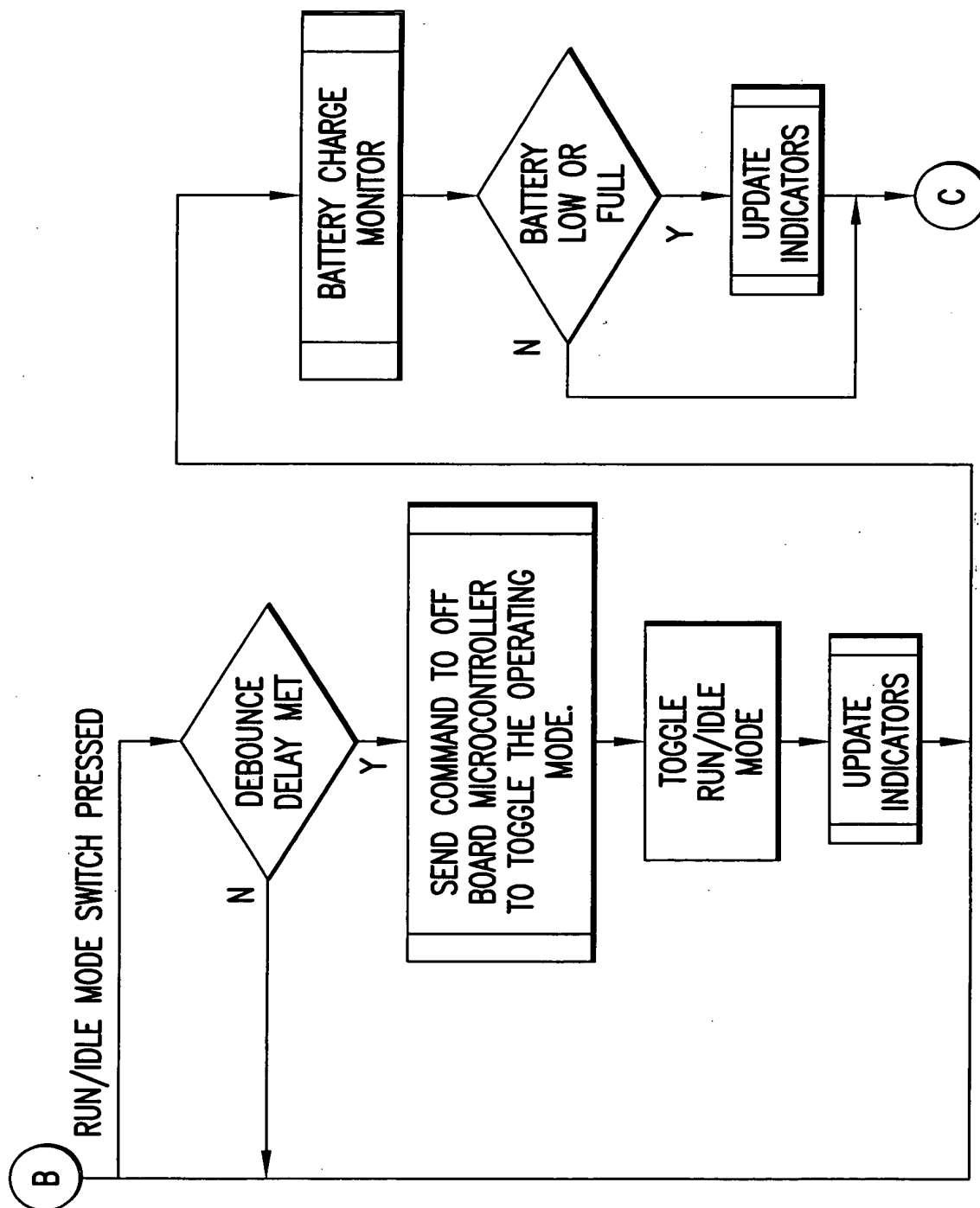


FIG. 3C

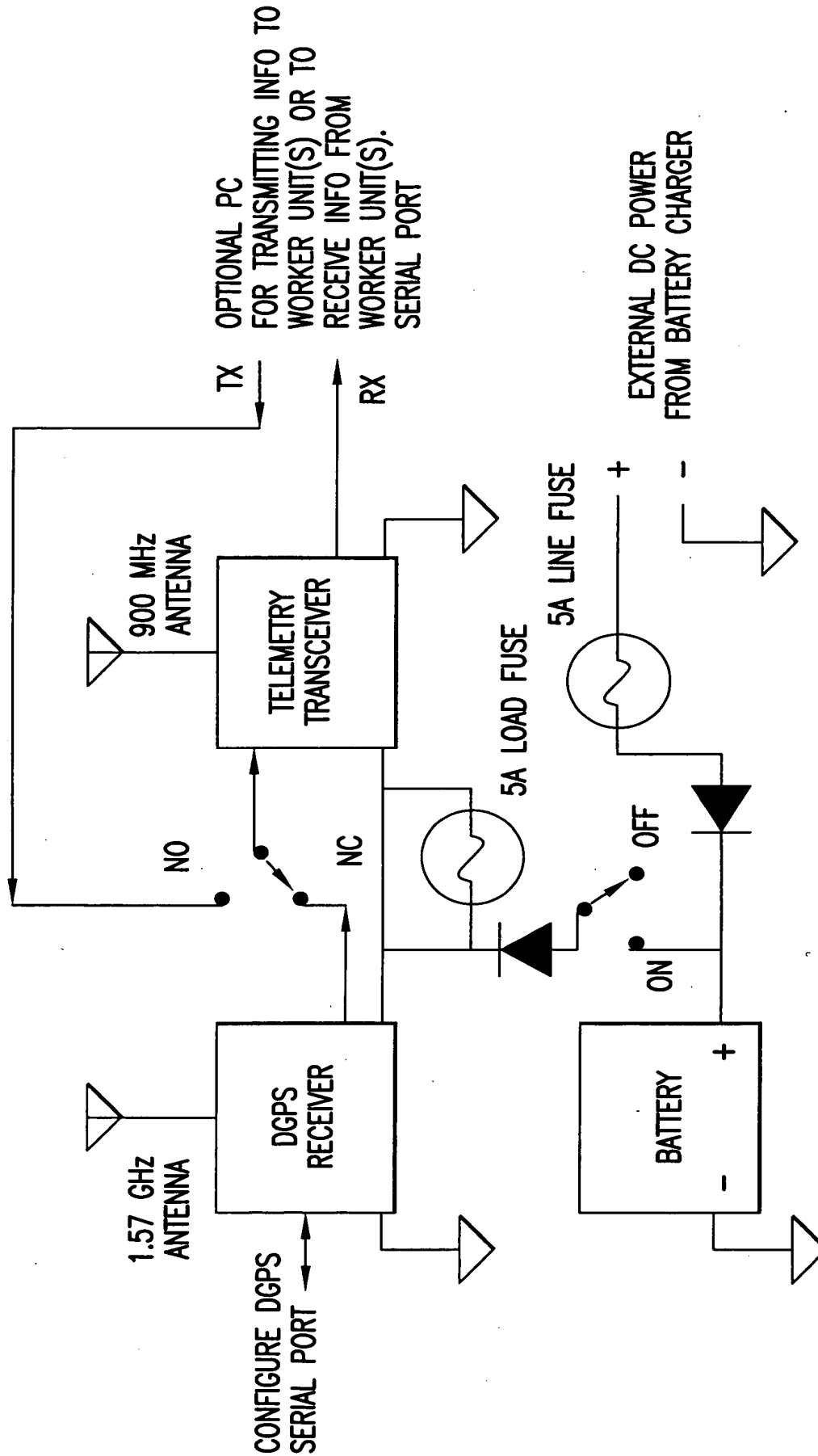


FIG. 4A

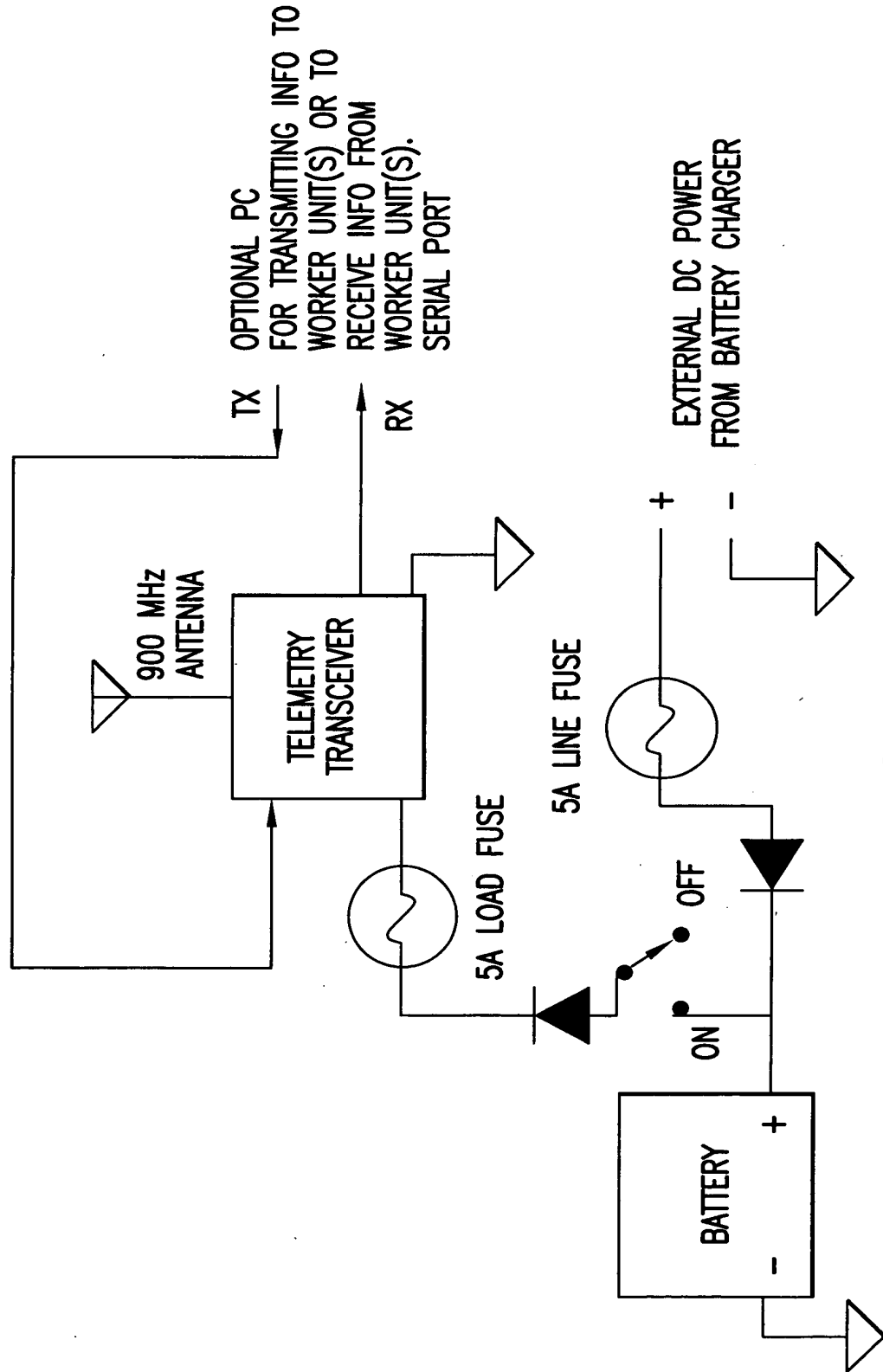


FIG. 4B

LPS MK3 PROGRAM INTERFACE			<div></div> <div></div> <div></div>	
FILE COMMANDS HELP				
SENSOR PORT ASSIGNMENT		DATA LOGGING INTERVAL		LPS DATA RECEIVED
LPS SENSOR PORT A		<div>1</div> <div></div> <div></div>		DATE/TIME
NO SENSOR ATTACHED		<input type="radio"/> HOURS		LATITUDE
LPS SENSOR PORT B		<input type="radio"/> MINUTES		LONGITUDE
NO SENSOR ATTACHED		<input checked="" type="radio"/> SECONDS		ALTITUDE
LPS SENSOR PORT C		LPS UNIT ID		POS. CONFIDENCE
NO SENSOR ATTACHED				INVALID QUALITY INFORMATION
LPS SENSOR PORT D		LPS TIME ZONE		LPS SENSOR PORT A
NO SENSOR ATTACHED				LPS SENSOR PORT B
				LPS SENSOR PORT C
				LPS SENSOR PORT D

FIG.5A

LPS MK3 PROGRAM INTERFACE		
FILE COMMANDS HELP		
<div>SENSOR PORT ASSIGNMENT</div> <div>LPS SENSOR PORT A</div> <div>UMd TEMPERATURE SENSOR</div> <div>LPS SENSOR PORT B</div> <div>MIE PERSONAL DataRAM</div> <div>LPS SENSOR PORT C</div> <div>NO SENSOR ATTACHED</div> <div>MIE PERSONAL DataRAM</div> <div>PHDS 4-GAS MONITOR</div> <div>QUEST TECH. 2900 SLM</div> <div>NO SENSOR ATTACHED</div>	<div>DATA LOGGING INTERVAL</div> <div>1</div> <div>HOURS</div> <div>MINUTES</div> <div>SECONDS</div> <div>LPS UNIT ID</div> <div>LPS TIME ZONE</div>	<div>LPS DATA RECEIVED</div> <div>DATE/TIME</div> <div>LATITUDE</div> <div>LONGITUDE</div> <div>ALTITUDE</div> <div>POS. CONFIDENCE</div> <div>INVALID QUALITY INFORMATION</div> <div>LPS SENSOR PORT A</div> <div>LPS SENSOR PORT B</div> <div>LPS SENSOR PORT C</div> <div>LPS SENSOR PORT D</div>
PAGE 8 SEC. 1 8/15 AT 7.2" LN 15 COL. 1 REC TRK - EXT		

FIG. 5B

LPS MK3 PROGRAM INTERFACE

FILE

COMMANDS

HELP

LOAD CONFIGURATION FILE

SAVE CONFIGURATION FILE

RESET INTERFACE - NEW UNIT

EXIT

LPS SENSOR PORT A

UMd TEMPERATURE SENSOR

LPS SENSOR PORT B

MIE PERSONAL DataRAM

LPS SENSOR PORT C

NO SENSOR ATTACHED

LPS SENSOR PORT D

NO SENSOR ATTACHED

DATA LOGGING INTERVAL

1

▲

▼

☐ HOURS

☐ MINUTES

☒ SECONDS

LPS UNIT ID

LPS TIME ZONE

LPS DATA RECEIVED

DATE/TIME

LATITUDE

LONGITUDE

ALTITUDE

POS. CONFIDENCE

INVALID QUALITY INFORMATION

LPS SENSOR PORT A

LPS SENSOR PORT B

LPS SENSOR PORT C

LPS SENSOR PORT D

PAGE 9

SEC. 1

9/16

AT 3.4"

LN 14

COL. 1

REC TRK - EXT

FIG.5C

LPS MK3 PROGRAM INTERFACE

FILE | COMMANDS | HELP

REQUEST CONFIGURATION DATA
SEND CONFIGURATION DATA
REQUEST TIME ZONE
SET TIME ZONE
REQUEST UNIT ID
SET UNIT ID
REQUEST LPS DATA STREAM
TERMINATE LPS DATA STREAM
REQUEST UNIT: GO IDLE MODE
REQUEST UNIT: GO RUN MODE

LPS SENSOR PORT C
NO SENSOR ATTACHED

LPS SENSOR PORT D
NO SENSOR ATTACHED

DATA LOGGING INTERVAL

1
HOURS
MINUTES
SECONDS

LPS UNIT ID
LPS TIME ZONE

LPS DATA RECEIVED

DATE/TIME
LATITUDE
LONGITUDE
ALTITUDE
POS. CONFIDENCE
INVALID QUALITY INFORMATION
LPS SENSOR PORT A
LPS SENSOR PORT B
LPS SENSOR PORT C
LPS SENSOR PORT D

PAGE 9 SEC. 1 9/15 AT 3.1" LN 12 COL. 1 REC TRK - EXT

FIG. 5D

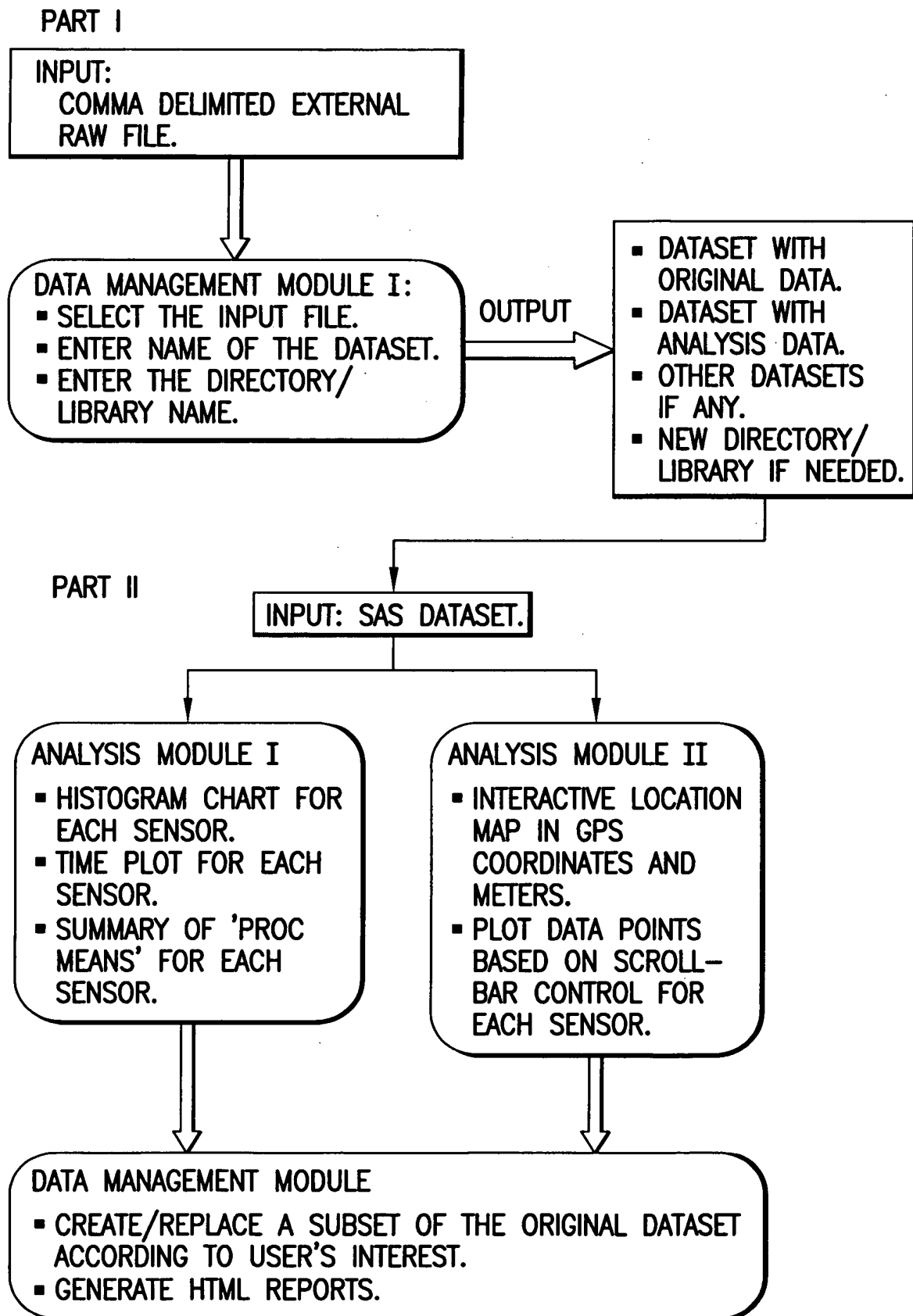


FIG.6

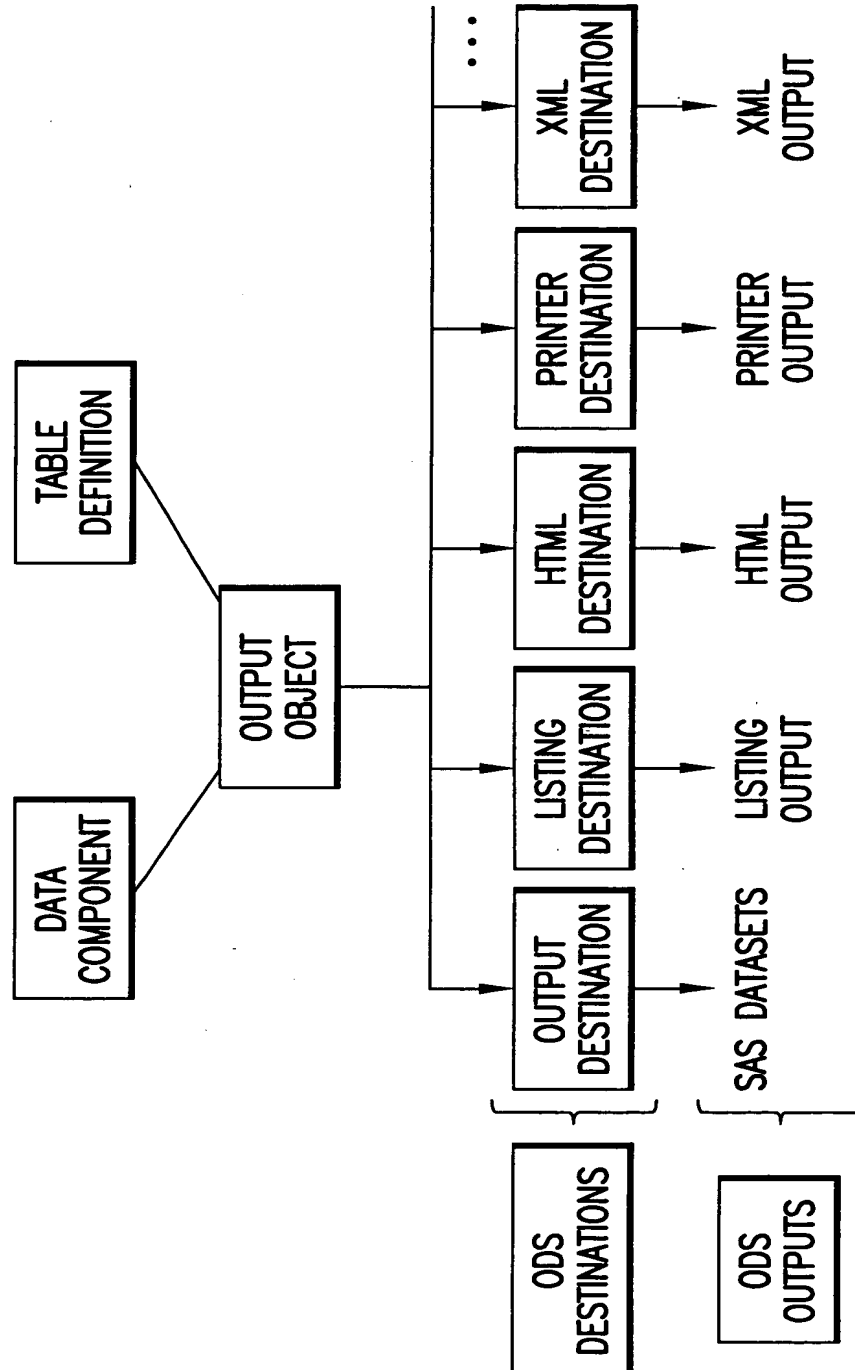


FIG. 7

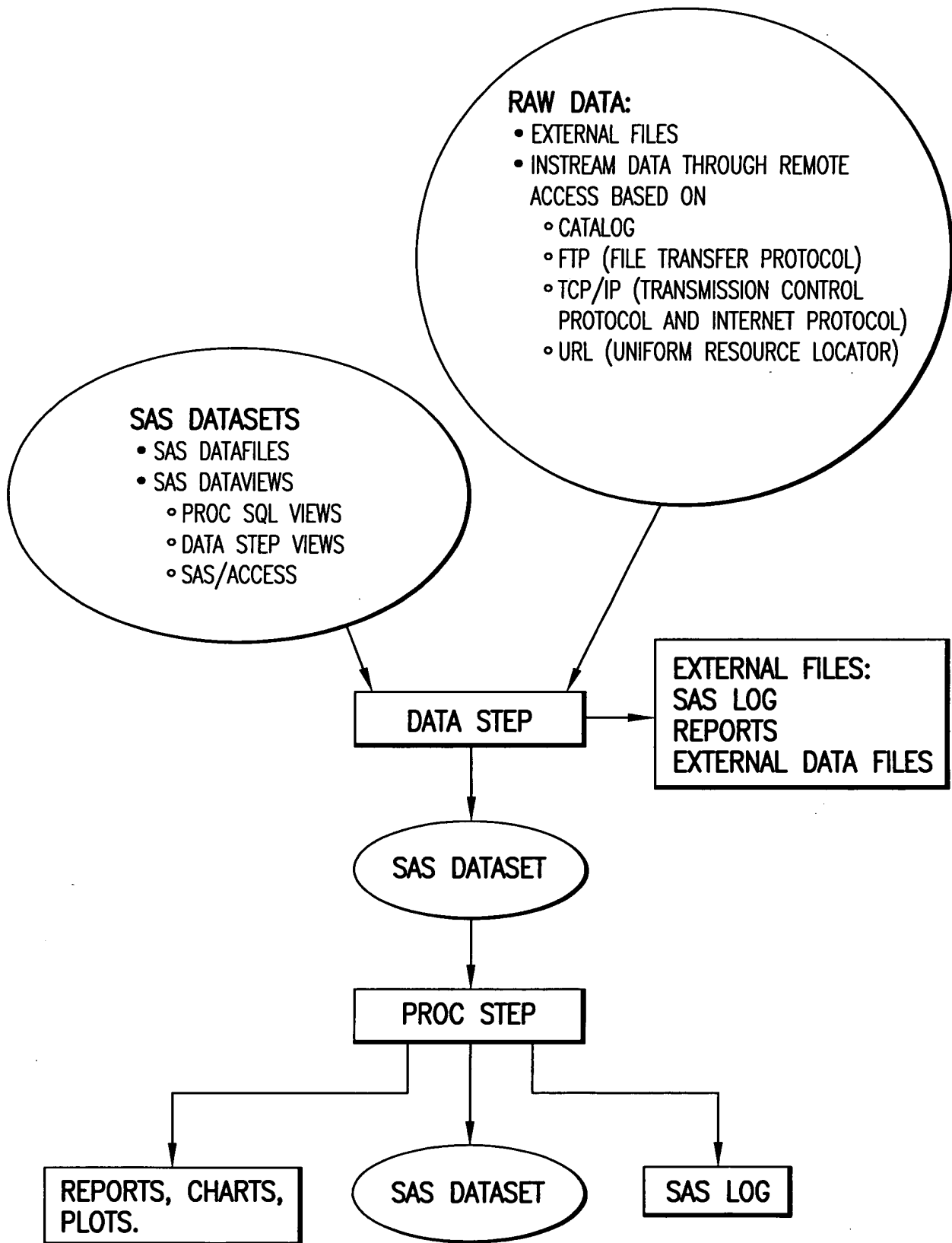


FIG.8

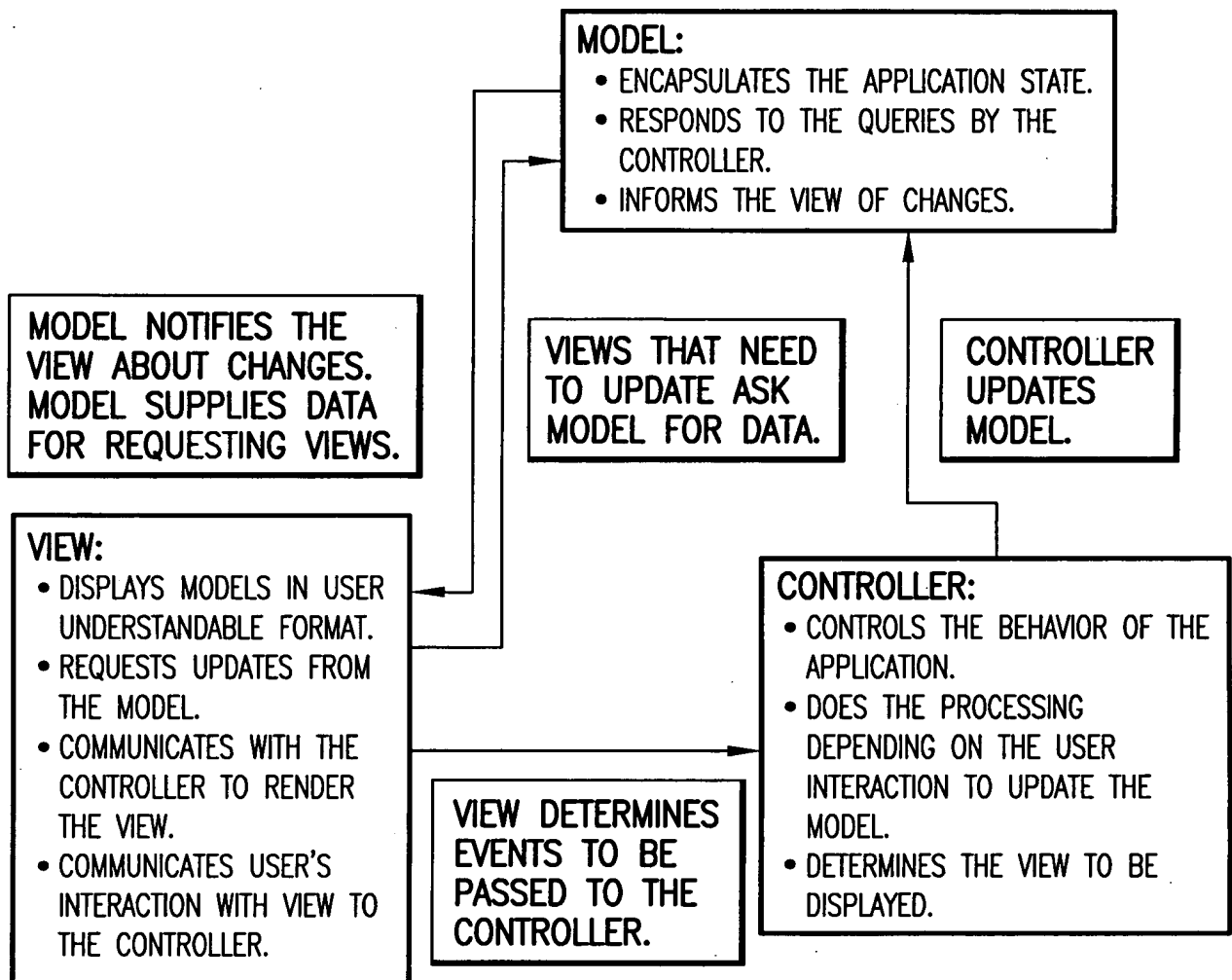


FIG.9

LPS USER ANALYSIS SOFTWARE

CREATE A NEW DATASET FROM TEXT FILE USE EXISTING SAS DATASET

CREATE A NEW DATASET FROM TEXT FILE	USE EXISTING SAS DATASET
<p>SENSORS <input type="text"/> 1000</p> <p>TO <input type="text"/> LA <input type="text"/> LM <input type="text"/> SEC <input type="text"/></p> <p>SELECT A FILE <input type="text"/> 1010</p> <p>A:\DATA020731r001.TXT <input type="button" value="BROWSE"/></p> <p>ENTER DATASET NAME <input type="text"/> 1020</p> <p>CHARLOTTE</p> <p>SELECT LIBRARY NAME <input type="text"/> 1030</p> <p>MYSASLIB <input type="button" value="BROWSE"/></p> <p><input type="button" value="ANALYZE"/> 1040</p> <p>SET REFERENCE POINT <input type="text"/> 1050</p> <p>LONGITUDE <input type="text"/></p> <p>LATITUDE <input type="text"/></p> <p><input type="button" value="SET"/></p>	<p>SELECT LIBRARY NAME <input type="text"/></p> <p>ENTER DATASET NAME <input type="text"/></p> <p><input type="button" value="ANALYZE"/></p> <p>SET REFERENCE POINT</p> <p>LONGITUDE <input type="text"/></p> <p>LATITUDE <input type="text"/></p> <p><input type="button" value="SET"/></p>

FIG.10

Obs	STAT	DUST	LAVG	LMAX
1	N	2032.00	2032.00	2032.00
2	MIN	718.00	51.60	51.60
3	MAX	952.00	91.20	93.40
4	MEAN	763.48	64.55	66.07
5	STD	16.75	8.17	8.61
6	N (>0)	2032.00	.	.
7	GMN	763.31	.	.
8	GSD	1.02	.	.

FIG. 11A

Obs	POSITION CONF	STAT	DATETIME	LAT METERS	LONG METERS	ALT METERS	DUST	LAVG	LMAX
1		N	01JAN60:00:33:52.0	2032.00	2032.00	2032	2032	2032.0	2032.0
2		MIN	23MAY02:10:24:22.0	-635.54	-26.38	325	718	51.6	51.6
3		MAX	23MAY02:10:58:41.0	53.52	142.32	511	952	91.2	93.4
4		MEAN	23MAY02:10:41:29.9	-380.63	69.36	356	763	64.5	66.1
5		STD	01JAN60:00:09:55.7	208.23	52.73	29	17	8.2	8.6
6	2DD	N	01JAN60:00:04:16.0	256.00	256.00	256	256	256.0	256.0
7	2DD	MIN	23MAY02:10:24:32.0	-635.48	-2.58	330	747	51.6	51.6
8	2DD	MAX	23MAY02:10:58:05.0	52.29	142.32	389	812	81.2	83.2
9	2DD	MEAN	23MAY02:10:44:14.5	-469.84	79.39	362	762	65.3	66.7
10	2DD	STD	01JAN60:00:06:37.8	145.32	49.49	15	10	8.0	8.4
11	2DU	N	01JAN60:00:00:17.0	17.00	17.00	17	17	17.0	17.0
12	2DU	MIN	23MAY02:10:33:37.0	-551.90	-11.77	344	746	51.7	52.0
13	2DU	MAX	23MAY02:10:51:13.0	-401.20	115.67	411	871	71.5	73.3
14	2DU	MEAN	23MAY02:10:46:32.1	-476.12	44.39	360	770	57.3	58.2
15	2DU	STD	01JAN60:00:05:35.7	68.27	53.07	16	31	6.1	6.6
16	3DD	N	01JAN60:00:23:03.0	1383.00	1383.00	1383	1383	1383.0	1383.0
17	3DD	MIN	23MAY02:10:24:22.0	-635.54	-8.23	325	718	51.6	51.6
18	3DD	MAX	23MAY02:10:58:41.0	53.52	142.19	405	952	91.2	93.4
19	3DD	MEAN	23MAY02:10:39:19.2	-321.99	78.58	348	764	65.1	66.6
20	3DD	STD	01JAN60:00:10:45.6	216.45	51.17	16	18	8.2	8.6
21	3DU	N	01JAN60:00:06:03.0	363.00	363.00	363	363	363.0	363.0
22	3DU	MIN	23MAY02:10:29:47.0	-627.36	-26.38	332	734	51.6	51.6
23	3DU	MAX	23MAY02:10:51:26.0	-272.03	116.57	511	829	79.0	80.3
24	3DU	MEAN	23MAY02:10:47:55.2	-533.97	26.78	386	761	62.4	63.9
25	3DU	STD	01JAN60:00:03:12.8	79.69	37.98	49	12	7.9	8.5
26	CDR	N	01JAN60:00:00:13.0	13.00	13.00	13	13	13.0	13.0
27	CDR	MIN	23MAY02:10:33:17.0	-459.51	111.39	344	755	61.3	62.4
28	CDR	MAX	23MAY02:10:33:36.0	-449.85	112.66	344	786	68.4	70.1
29	CDR	MEAN	23MAY02:10:33:27.3	-455.80	112.18	344	769	64.5	66.1
30	CDR	STD	01JAN60:00:00:07.1	4.89	0.64	0	11	1.6	1.9

FIG. 11B

VARIABLE: DUST

QUANTILES (DEFINITION 5)	
QUANTILE	ESTIMATE
100% MAX	952
99%	826
95%	790
90%	780
75% Q3	768
50% MEDIAN	759
25% Q1	754
10%	751
5%	749
1%	741
0% MIN	718

FIG.11C

VARIABLE: LAVG

QUANTILES (DEFINITION 5)	
QUANTILE	ESTIMATE
100% MAX	91.2
99%	82.0
95%	78.0
90%	75.7
75% Q3	70.9
50% MEDIAN	64.5
25% Q1	57.5
10%	53.6
5%	52.3
1%	51.6
0% MIN	51.6

FIG.11D

VARIABLE: LMAX

QUANTILES (DEFINITION 5)	
QUANTILE	ESTIMATE
100% MAX	93.40
99%	83.90
95%	79.70
90%	77.60
75% Q3	73.00
50% MEDIAN	66.10
25% Q1	58.85
10%	54.30
5%	52.90
1%	51.60
0% MIN	51.60

FIG.11E

FREQUENCY

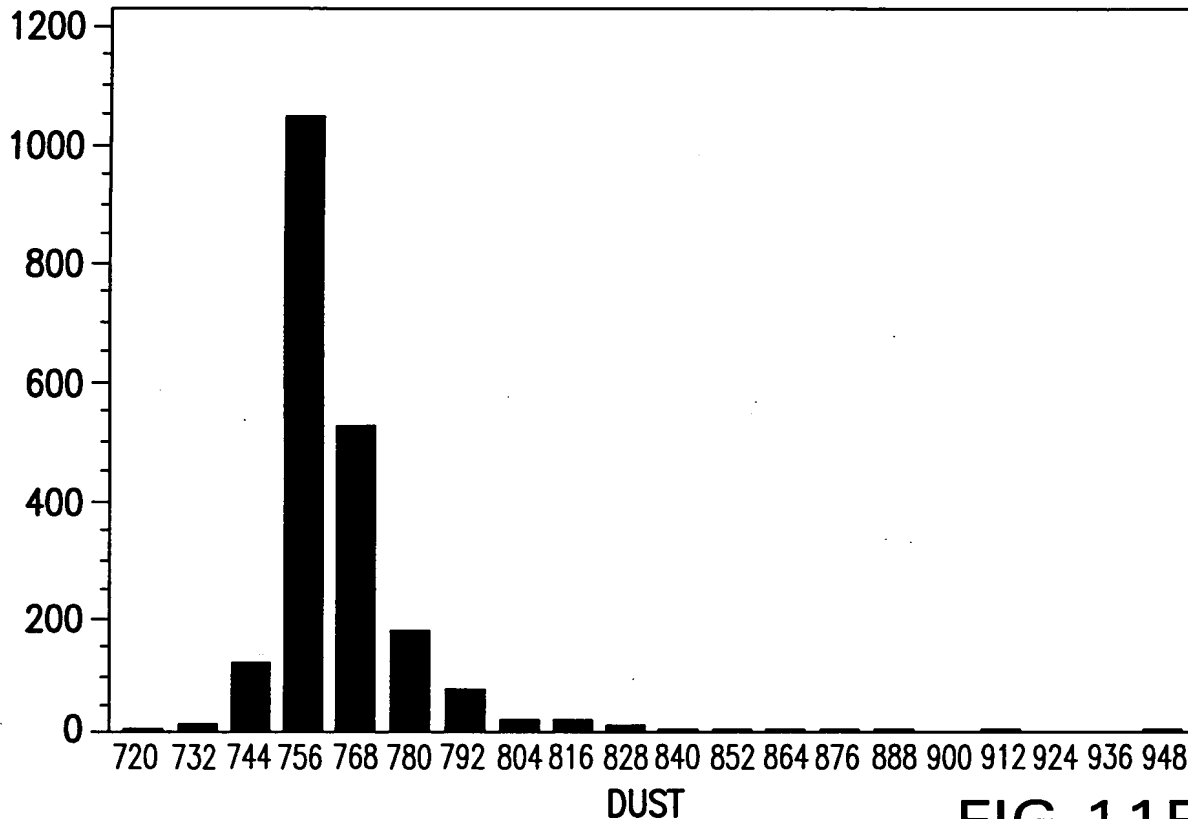


FIG. 11F

FREQUENCY

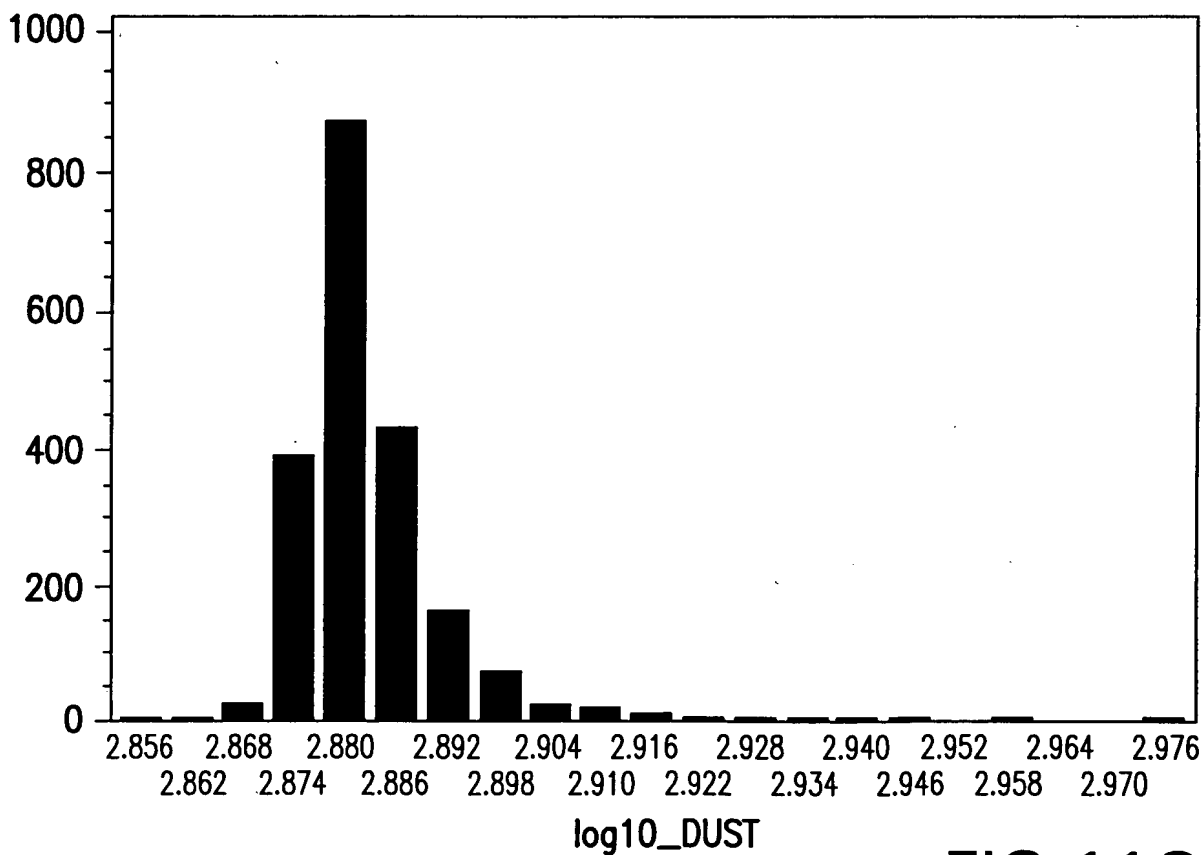
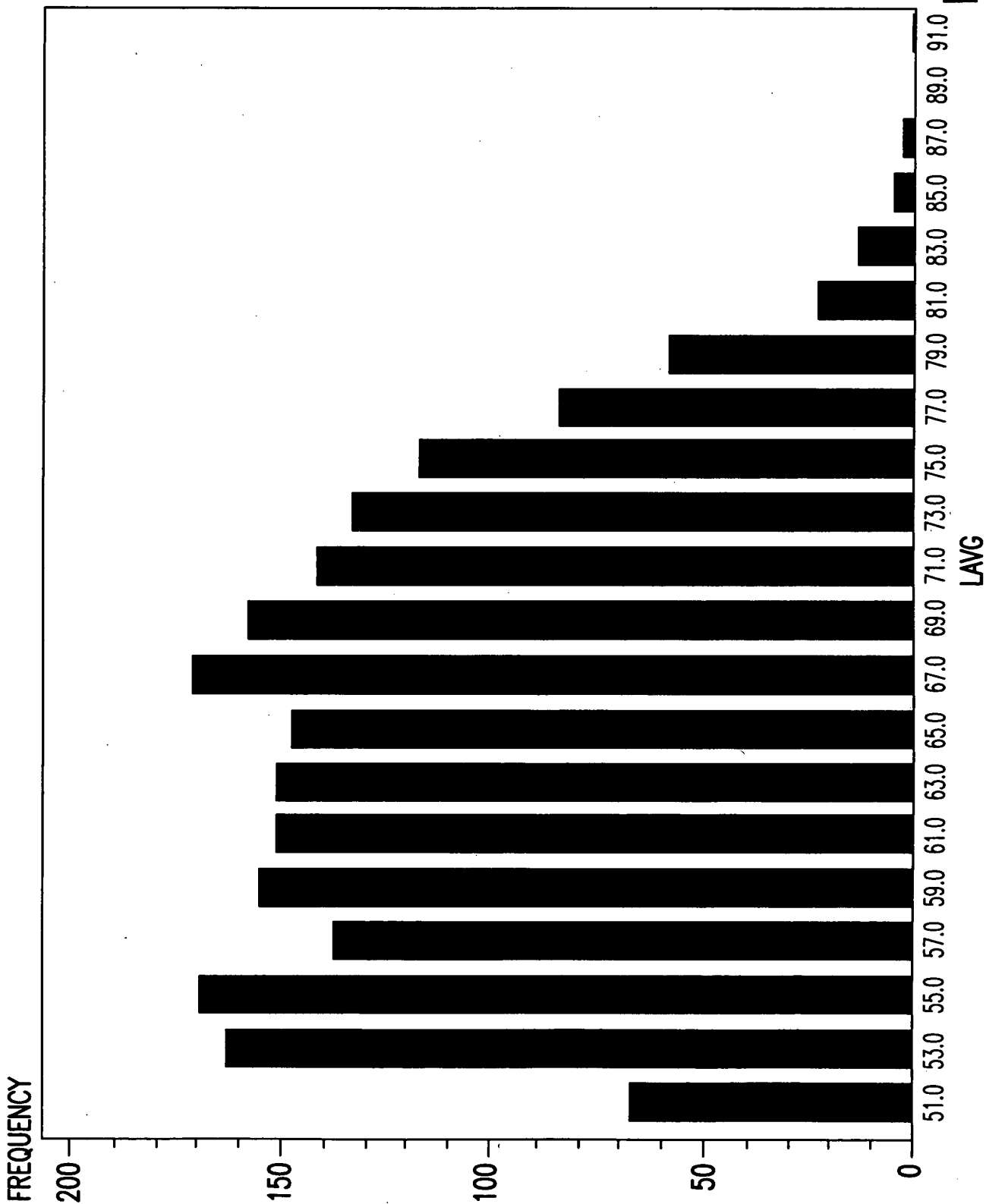
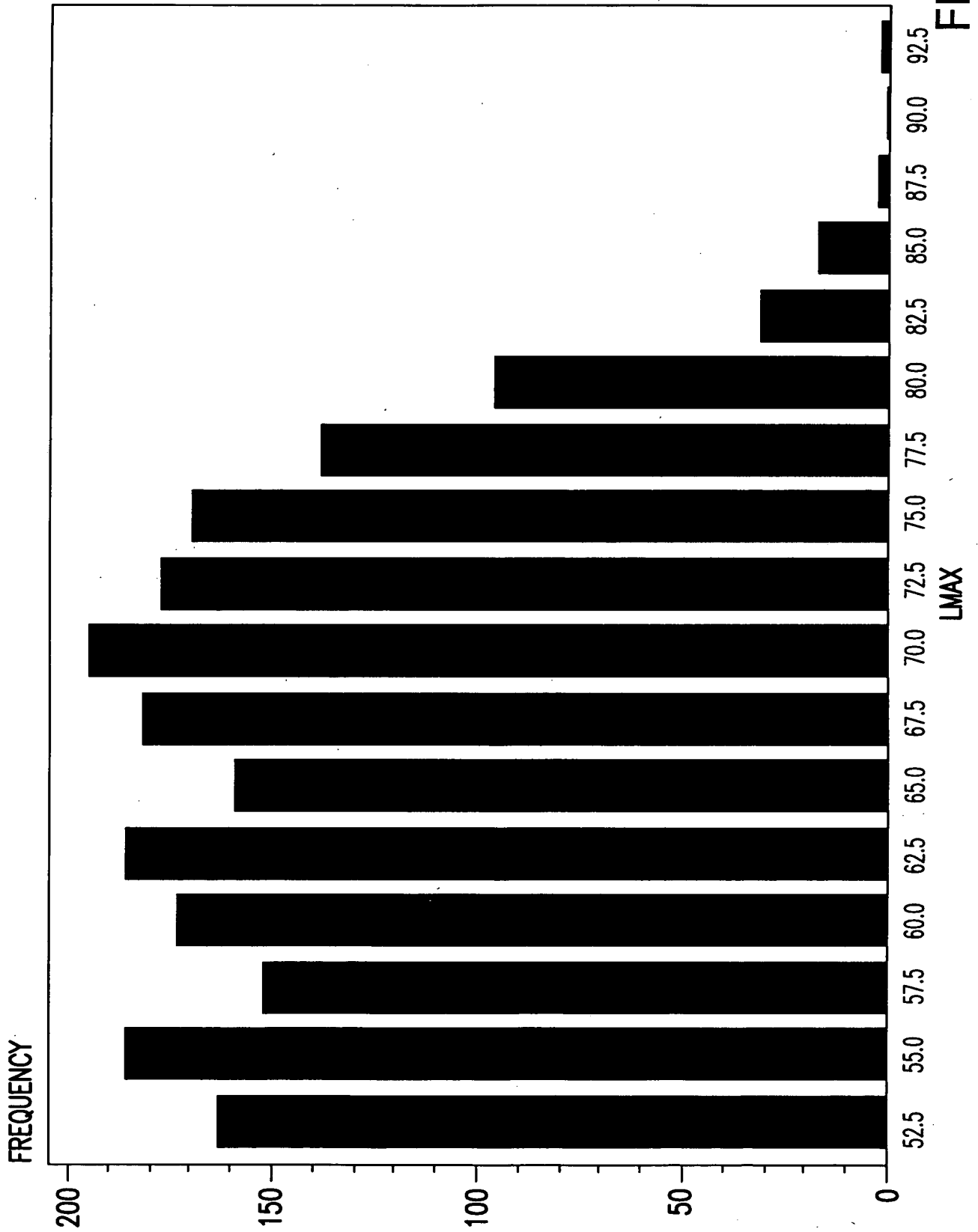


FIG. 11G





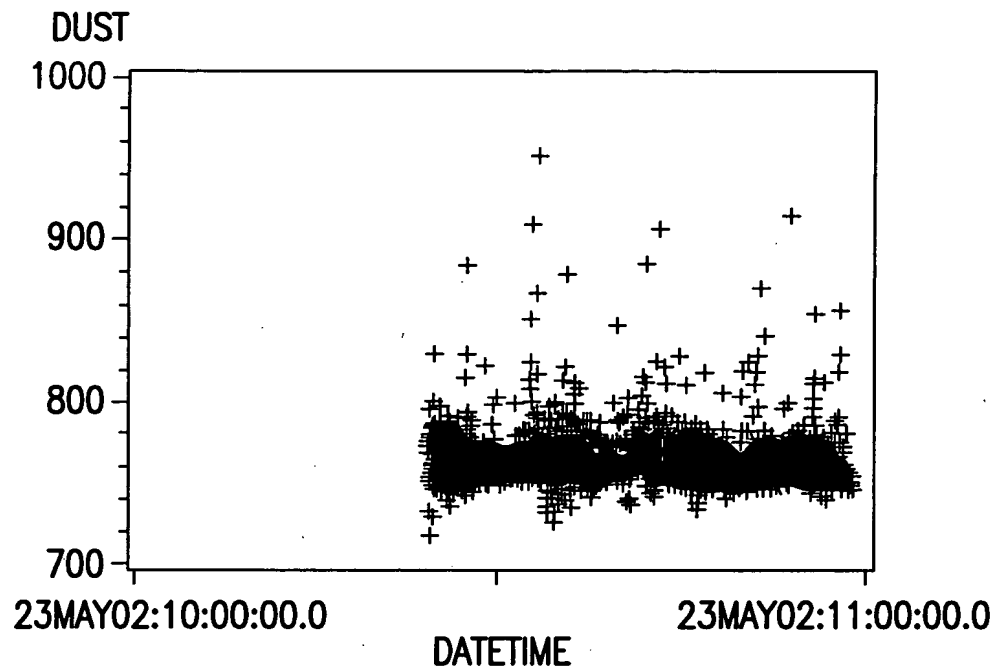


FIG. 11J

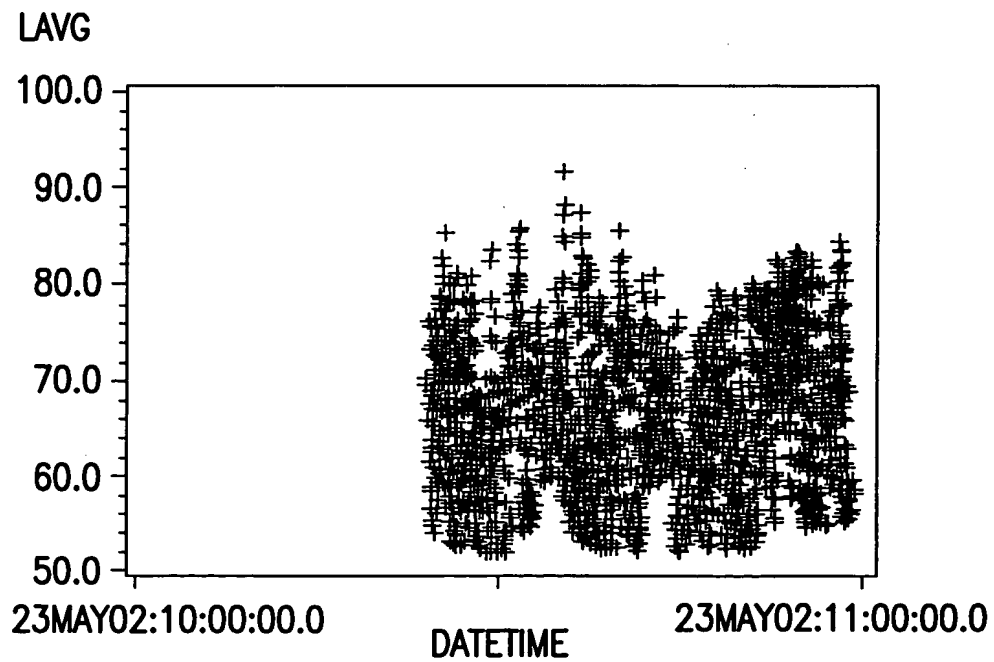


FIG. 11K

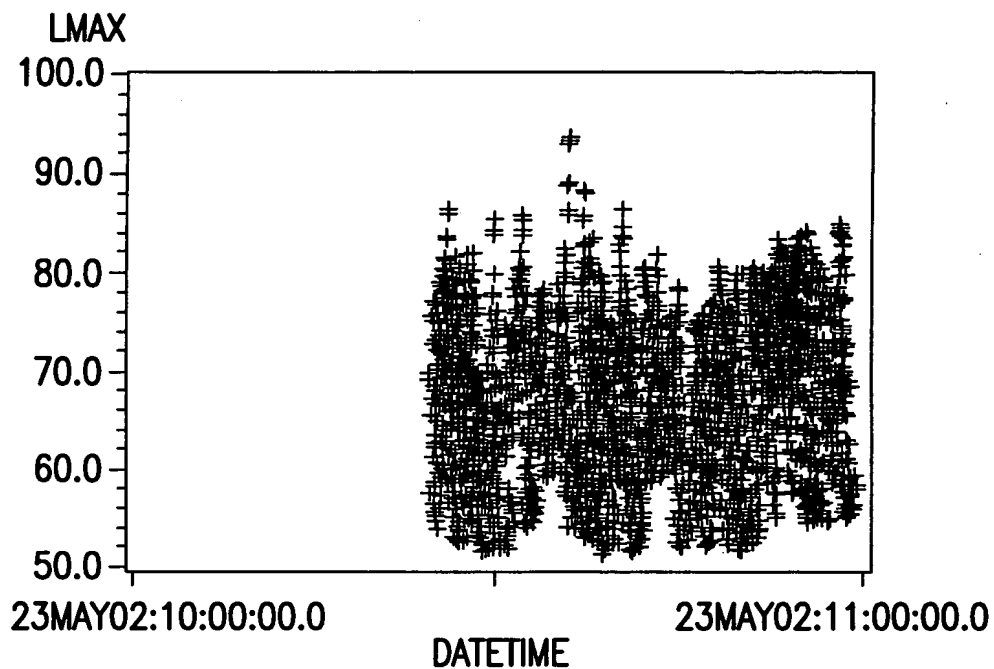


FIG. 11L

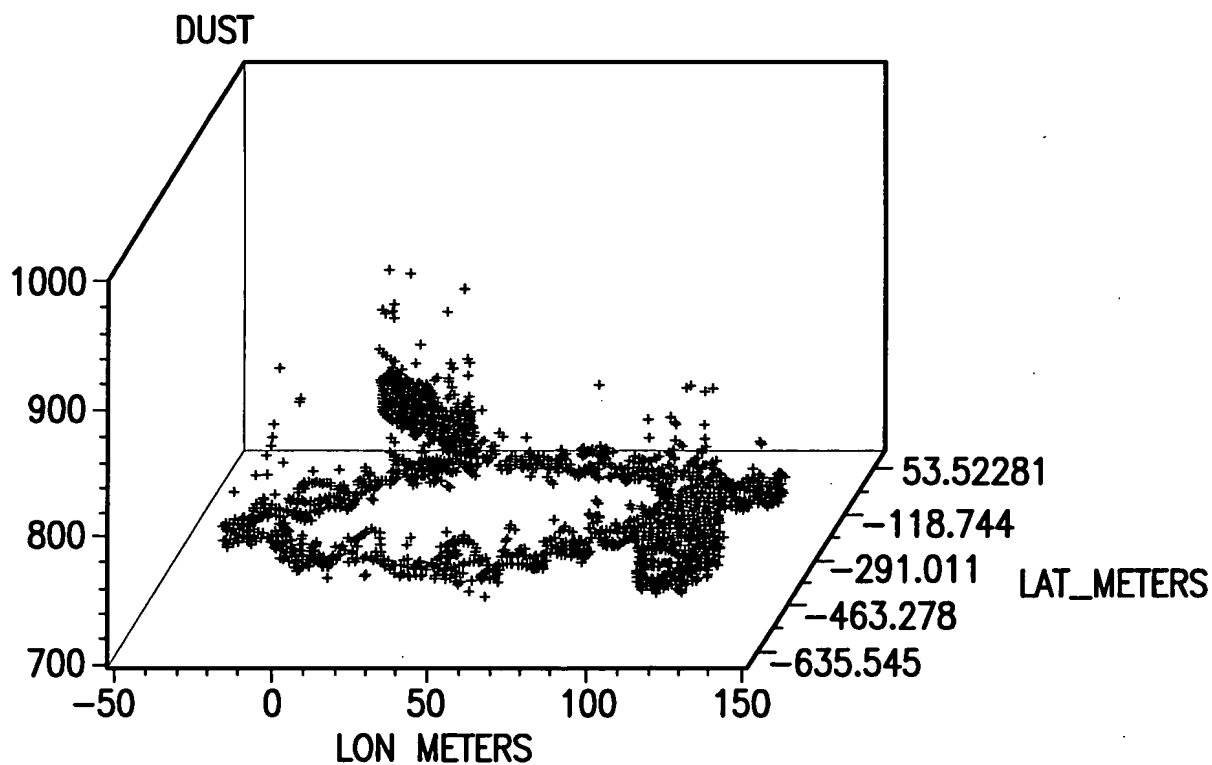


FIG. 11M

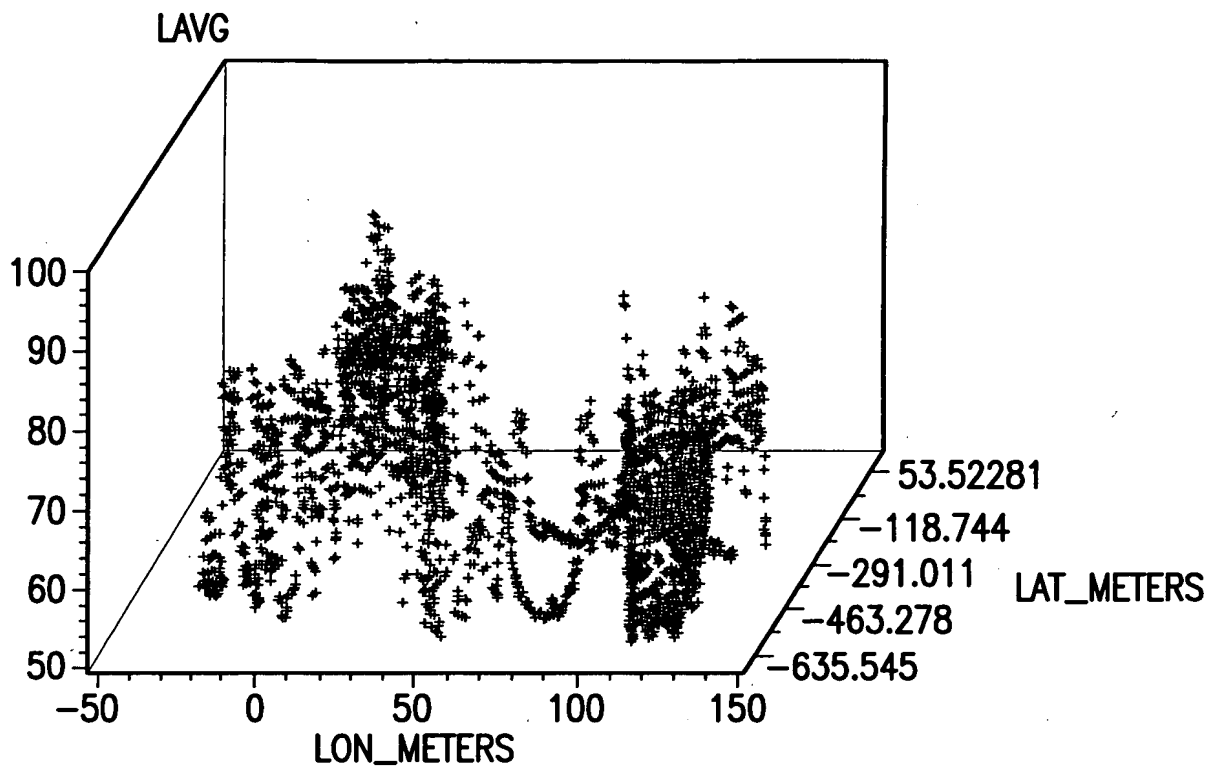


FIG.11N

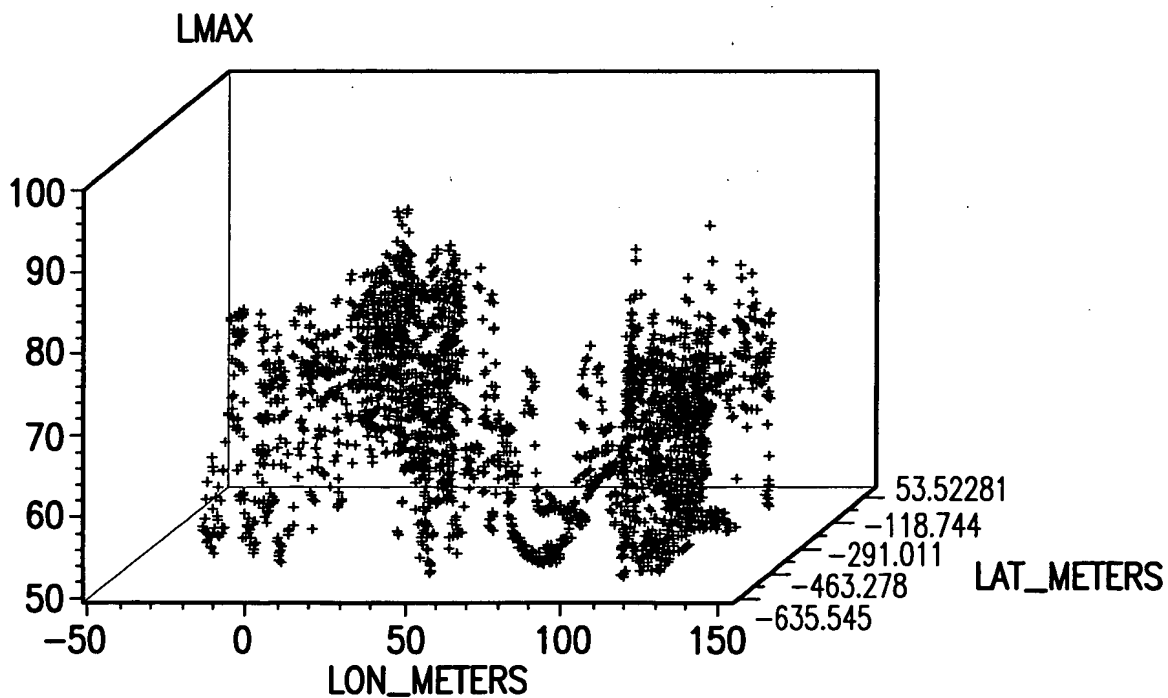


FIG.11O

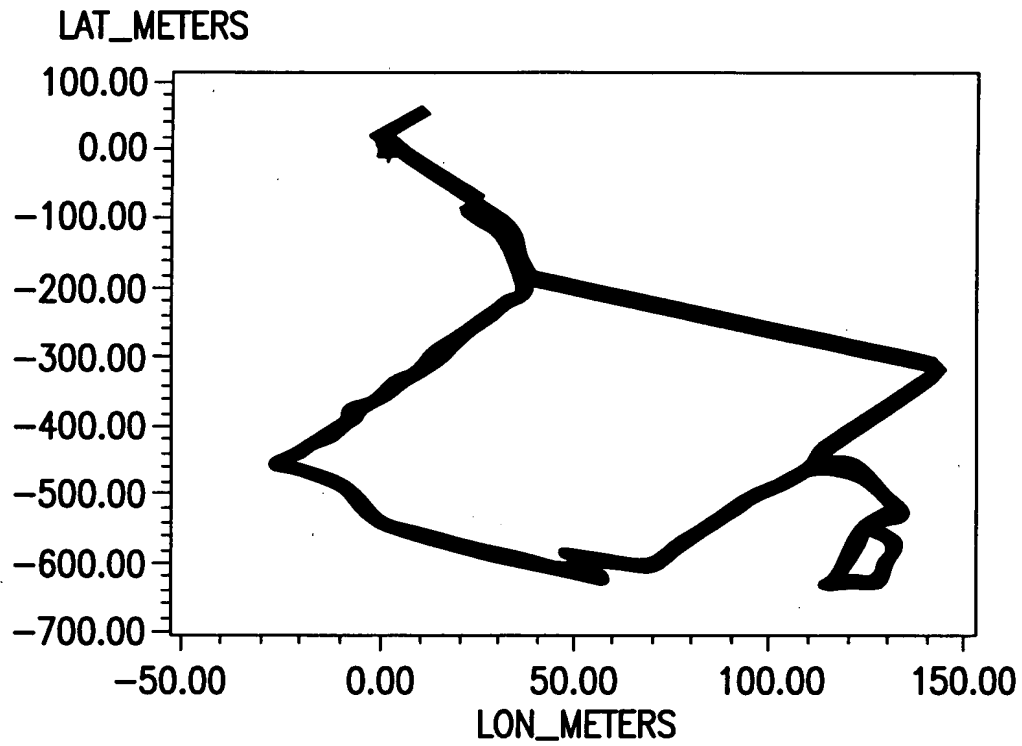


FIG.11P

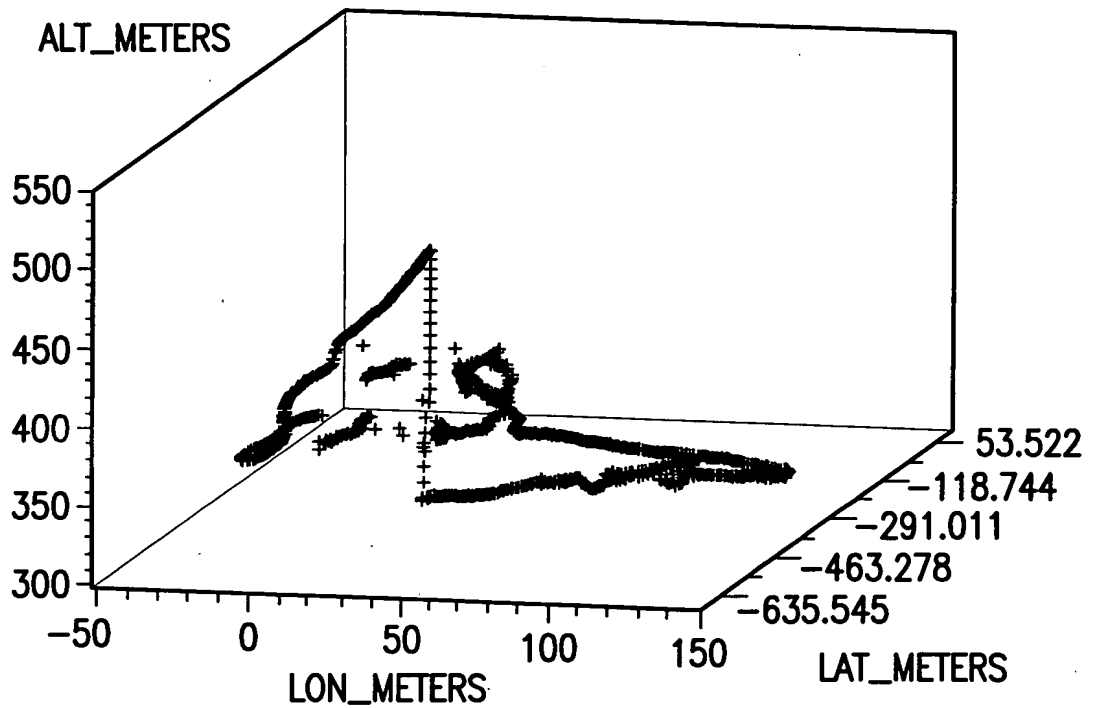


FIG.11Q

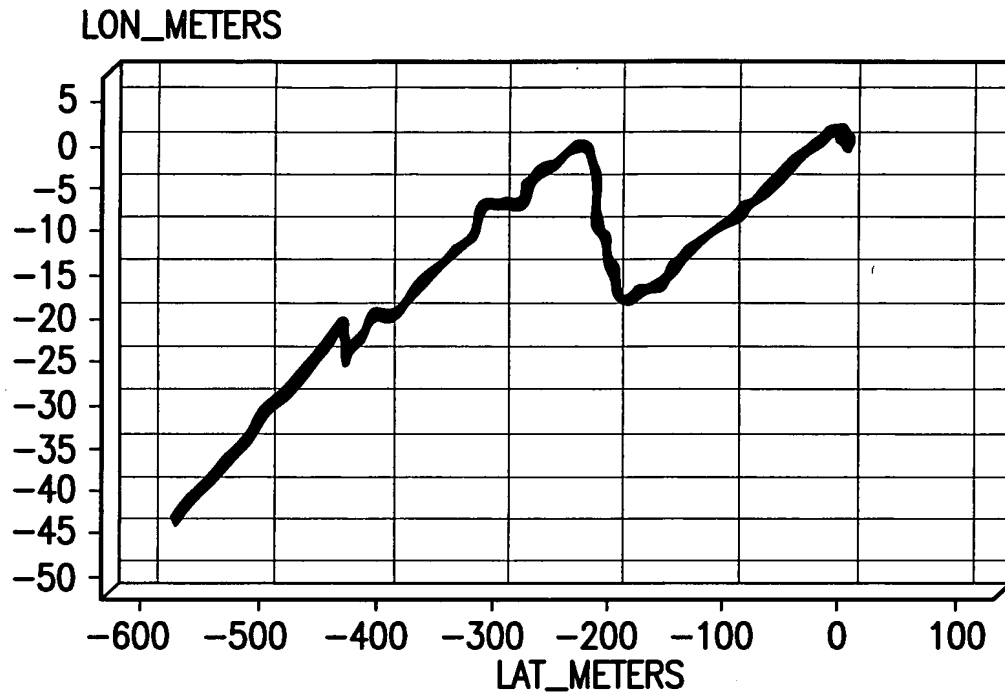


FIG. 11R

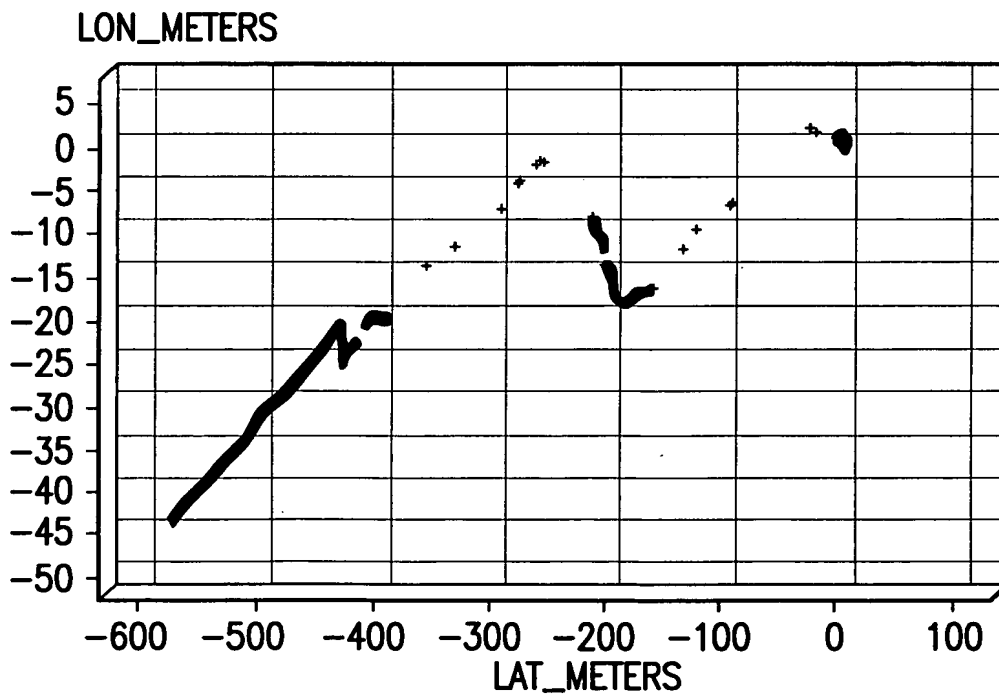


FIG. 11S

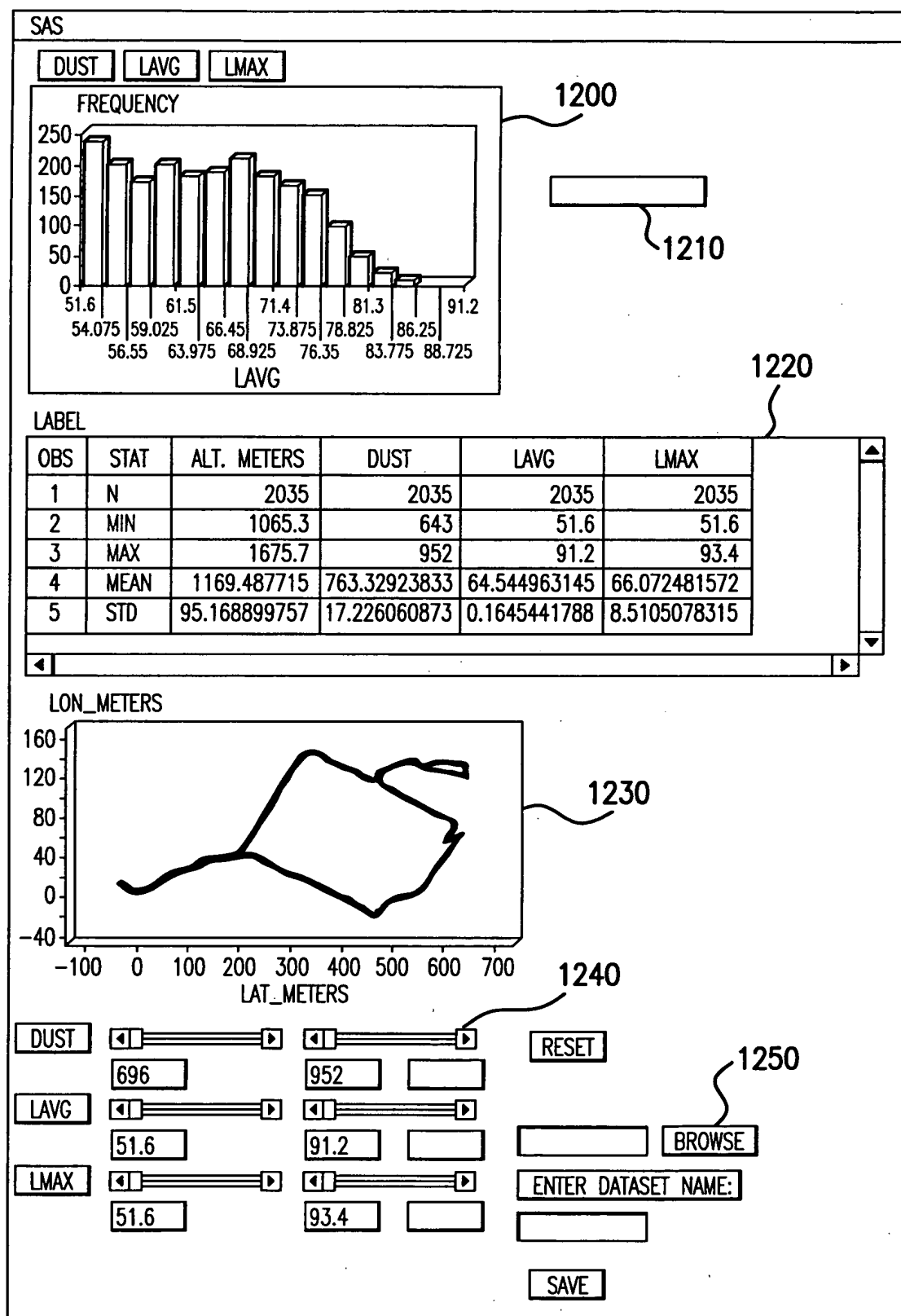


FIG.12

TABLE OF CONTENTS

LPS ANALYSIS REPORT
THE MEANS PROCEDURE

VARIABLE	N	MEAN	STD. DEV.	MINIMUM	MAXIMUM
DUST	2032	763.4832677	16.7478686	718.0000000	952.0000000
LMAX	2032	66.073868	8.6120598	51.6000000	93.4000000
LAVG	2032	64.549154	8.1664903	51.6000000	91.2000000

LPS ANALYSIS REPORT
THE UNIVARIATE PROCEDURE
VARIABLE: DUST

QUANTILES (DEFINITION 5)	
QUANTILE	ESTIMATE
100%	952
99%	826
95%	790
90%	780
75% Q3	768
50% MEDIAN	759

FIG.13

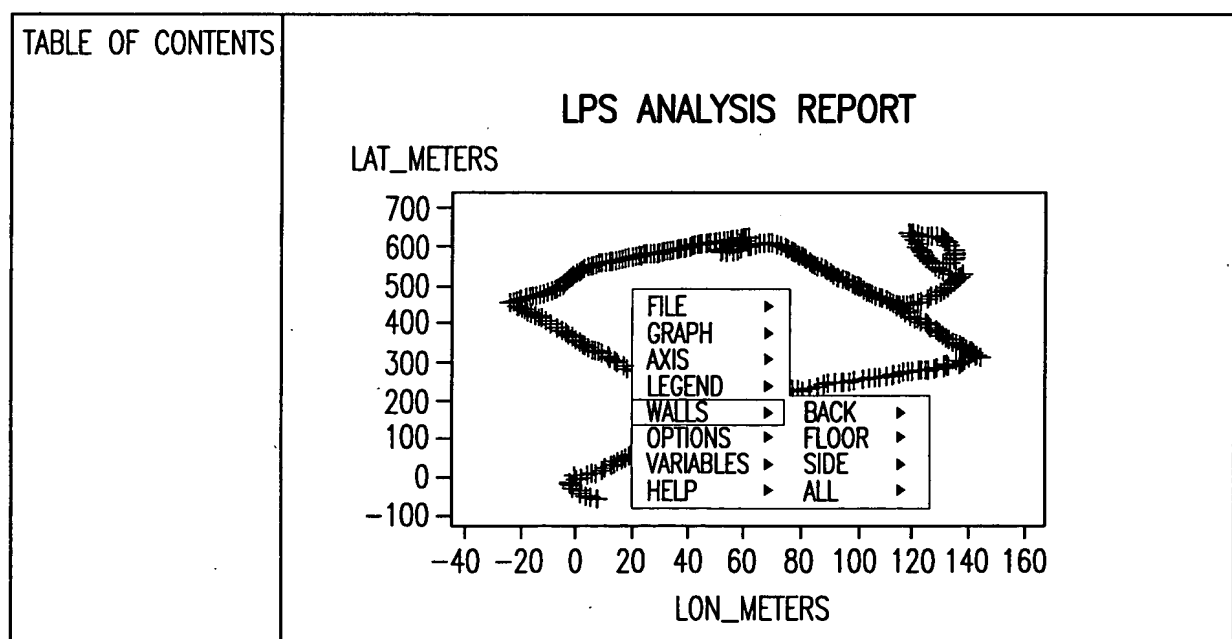


FIG.14

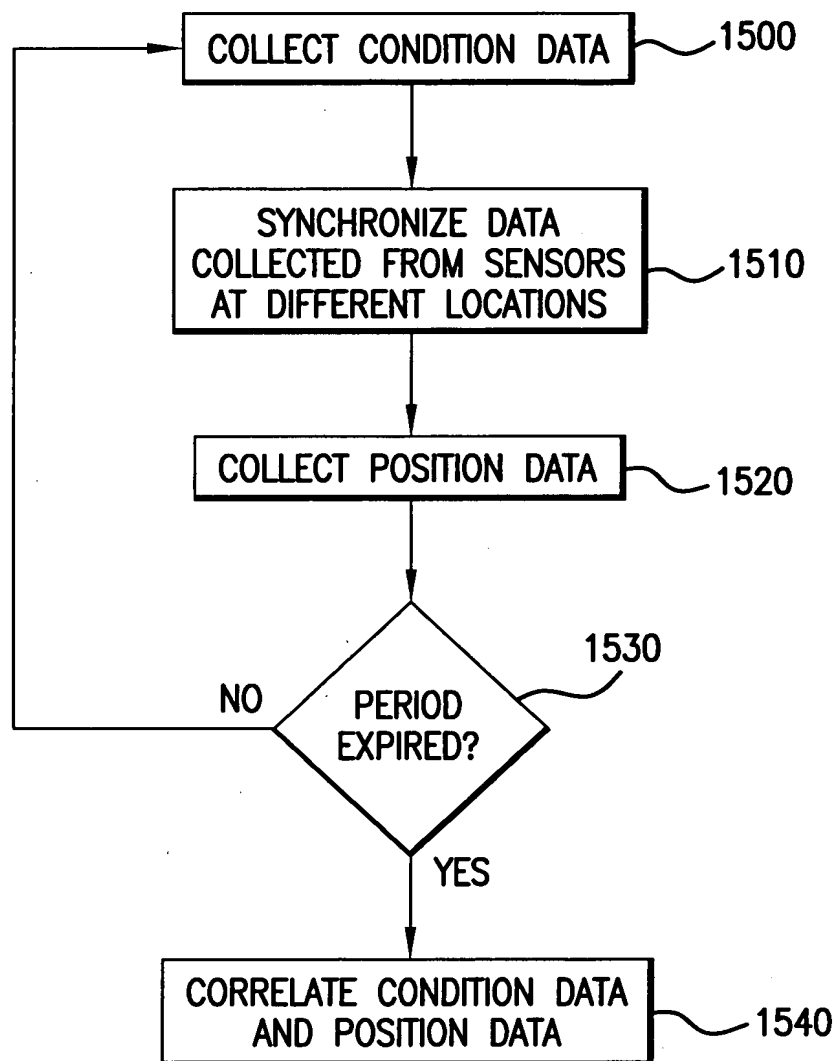


FIG. 15

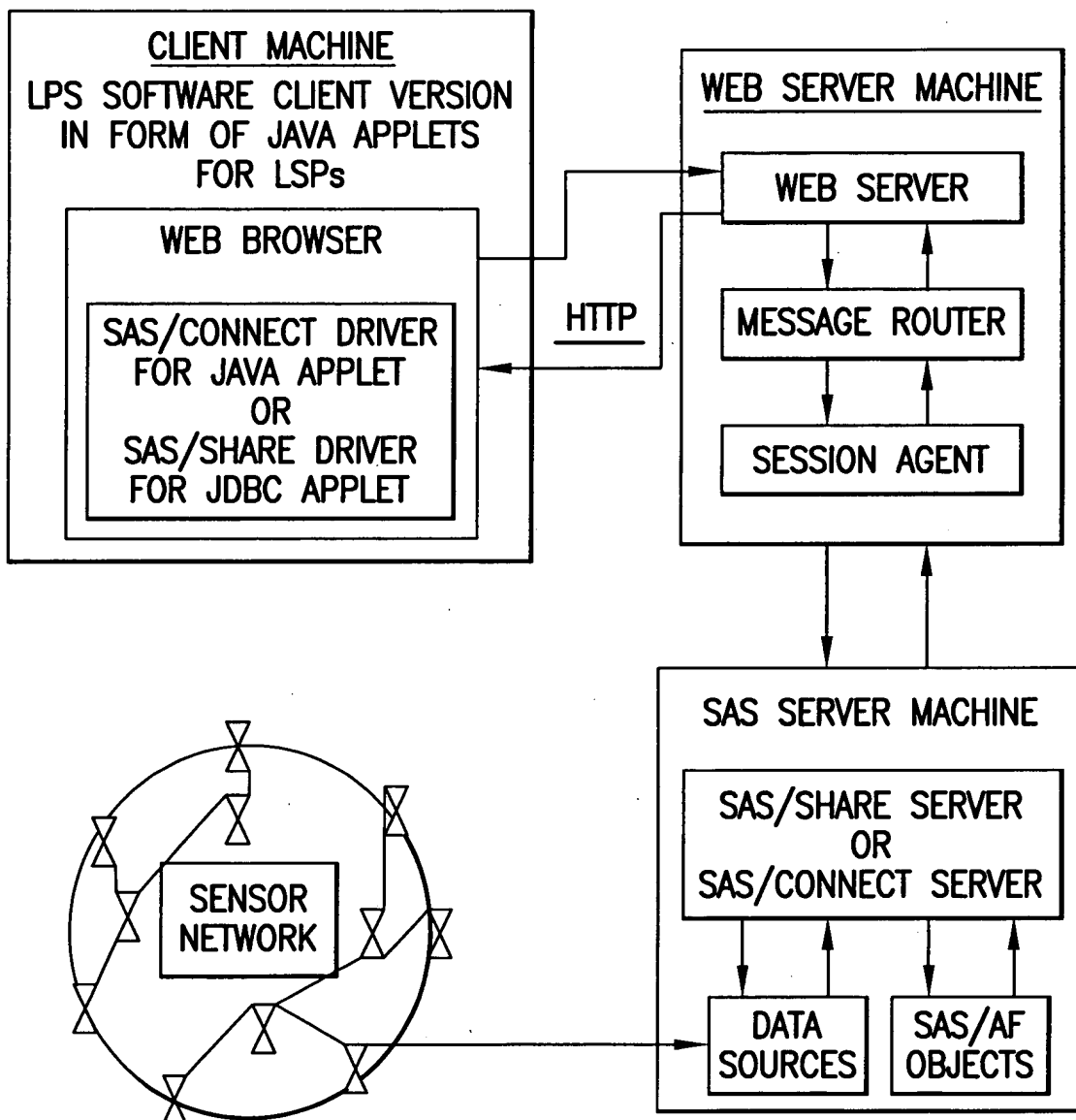


FIG.16

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